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SEARCH RESULTS

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CXQU: A compact XML storage for efficient query and update processing

Alkhatib, R.; Scholl, M.H.;
Digital Information Management, 2008. ICDIM 2008. Third International Conference on
Digital Object Identifier: 10.1109/ICDIM.2008.4746748
Publication Year: 2008 , Page(s): 605 - 612

IEEE CONFERENCES

The volume of XML data is increasing rapidly. This poses challenges to the database community to find XML is by nature verbose, compression is an important issue for XML. In this paper, we propose a new queries and updates but also compresses the structure of an XML document based on the exploitation XML documents by using a labeling scheme derived from the ORDPATH labeling scheme. CXQU stores t separately in a robust compact storage that includes a set of access support structures to guarantee fa especially insertion. An experimental evaluation on sets of XML data shows the efficiency of CXQU.

A Passive UHF RF Identification CMOS Tag IC Using Ferroelectric RAM in 0.35-μm Technology

Nakamoto, H.; Yamazaki, D.; Yamamoto, T.; Kurata, H.; Yamada, S.; Mukaida, K.; Ninomiya, T.; Ohkawa, T.; Masui, S.; Gotoh, K.;
Solid-State Circuits, IEEE Journal of
Volume: 42 , Issue: 1
Digital Object Identifier: 10.1109/JSSC.2006.886523
Publication Year: 2007 , Page(s): 101 - 110

IEEE JOURNALS

A passive UHF RF identification (RFID) tag IC with embedded 2-KB ferroelectric RAM (FeRAM) for rewri and-write transaction time over EEPROM-based tag ICs. The resulting FeRAM-based tag has a nominall write operations, which is indispensable for data write applications. The evaluated tag communication r 4.3 m, at the 953-MHz carrier frequency with 4-W transmitting Effective Isotropic Radiated Power (EIR features two circuit blocks to maximize the communication range in 0.35-mum CMOS/FeRAM technolog can improve the measured efficiency by up to 36.6% by reducing the input parasitic capacitances and more than twice that of previously-published results. Second is a low-voltage current-mode ASK demo FeRAM, which converts the ASK power modulation into a linearly modulated current over an incoming

communication range. The developed demodulator can thus resolve the primary design tradeoff issue t in the conventional voltage-mode demodulator

The Design and Application of RFID Tag System for Logistical Unit

Xiaozheng E; Wenfeng Li;
Wireless Communications, Networking and Mobile Computing,
2008. WiCOM '08. 4th International Conference on
Digital Object Identifier: 10.1109/WiCom.2008.1465
Publication Year: 2008 , Page(s): 1 - 3

IEEE CONFERENCES

At present, RFID is used in some practical fields such as supply chain management, stock management tags are not suitable for individual items, especially for lower-priced goods. In this paper, firstly, the fe characterized, and its information is abstracted into a "tree" data structure. Secondly the logistical unit identified by using the SGTIN-96 and SSCC-96. Based on this, a scheme using the mix of RFID and bar a tag operation module (TOM), which maintenances the data saved in the tag by establishing the index effective operations of the RFID tag can be realized via TOM.

Study of Polluted Area Mapping System Based on Satellite Imagery

Xia Song; Xiao Weiwei; Jiang Congshi;
Education Technology and Computer Science, 2009. ETCS '09.
First International Workshop on
Volume: 1
Digital Object Identifier: 10.1109/ETCS.2009.214
Publication Year: 2009 , Page(s): 943 - 946

IEEE CONFERENCES

This paper mainly focus on managing and processing graphical data and attribute data relative to pollu rich geo-data to you with amazing speed and full context. The processes of importing, organizing, visu such as polluted area are investigated in detail. KML with a tag-based structure acts as an effective inte Earth Plug-in and its API are used to developing relevant functions to organize and manipulate spatial d designed for editing graphics. And satellite imagery in Google earth viewer plays an important role in n prototype system with primary operating functions is realized with Microsoft .NET platform and it can b enterprises.

Automated 3D Motion Tracking Using Gabor Filter Bank, Robust Point Matching, and Deformable Models

Ting Chen; Xiaoxu Wang; Sohae Chung; Metaxas, D.; Axel, L.;
Medical Imaging, IEEE Transactions on
Volume: 29 , Issue: 1
Digital Object Identifier: 10.1109/TMI.2009.2021041
Publication Year: 2010 , Page(s): 1 - 11

IEEE JOURNALS

Tagged magnetic resonance imaging (tagged MRI or tMRI) provides a means of directly and noninvasiv myocardium. Reconstruction of the motion field is needed to quantify important clinical information, e.g functional loss. In this paper, we present a three-step method for this task. First, we use a Gabor filter image frames, based on local phase analysis. Next, we use an improved version of the robust point ma of the myocardium, by establishing a transformation function and a one-to-one correspondence betwee In particular, the RPM helps to minimize the impact on the motion tracking result of (1) through-plane relatively small tag spacing. In the final step, a meshless deformable model is initialized using the trans refines the motion tracking and generates a dense displacement map, by deforming under the influenc displacement magnitude to retain its geometric structure. The 2D displacement maps in short and long deformable model, using the moving least square method, constrained by the minimization of the resid tested on a numerical phantom, as well as on *in vivo* heart data from normal volunteers and heart dise the new method has a good performance on both synthetic and real data. Furthermore, the method ha differences in myocardial strain distributions between heart disease (left ventricular hypertrophy) patie show that the proposed - method is capable of separating patients from healthy individuals. In addition quantification of local abnormalities in the myocardium strain distribution, which is critical for quantitat motion tracking approach can improve the throughput and reliability of quantitative strain analysis of h further clinical applications.

Free-flying magnetometer data system architecture and hardware realization using commercial, off the shelf (COTS) technology

Blaes, B.; Javadi, H.; Spencer, H.;
Digital Avionics Systems Conference, 1999. Proceedings. 18th
Volume: 2
Digital Object Identifier: 10.1109/DASC.1999.822000
Publication Year: 1999 , Page(s): 7.D.4-1 - 7.D.4-8 vol.2

IEEE CONFERENCES

The Free-Flying Magnetometer (FFM) is an autonomous spin-stabilized "sensorcraft" developed for the puck" FFMs were successfully ejected from the payload of a sounding rocket. The FFMs measured the v payload at relative distances up to 3 km, and telemetered their data, in bursts, to the ground. This first magnetic-field measurements employing multiple free-flying instruments is enabling new science by m the ionosphere involved in the production of aurora. At the heart of the FFM is a sensitive 3-axis fluxga subsystem that generates clocks and keeps a time for tagging data, implements and maintains sensor power and data flow. The data subsystem sequencing is implemented with a master state machine that interfaces, to state machines that control the system resources. This paper discusses the FFM data syst related to power, noise, and timing, and its implementation using COTS technology

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CGT Code-Based XML Data Compression Method

Sheng Zhang; Sha Chen; Yuping Liang;
Electronic Commerce and Security, 2009. ISECS '09. Second
International Symposium on
Volume: 2
Digital Object Identifier: 10.1109/ISECS.2009.128
Publication Year: 2009 , Page(s): 456 - 459

IEEE CONFERENCES

XML is a de-facto standard for exchanging and presenting information on the Web. However, XML data inflates the size of the data due to the repeated tags and structures. The data verbosity problem gives processing and data exchange. Compression techniques are the important way to overcome the verbos document, we put forward a new XML data compression method called CGTXDC which uses XML Schem structure information of XML document and adopts CGT code to encode each tree node for maintaining CGTXDC requires only a single pass over the input XML document during the compression process and memory. The experimental results show much better compression ratio than that of representative XMI Xgrind.

Modeling Massive RFID Data Sets: A Gateway-Based Movement Graph Approach

Gonzalez, H.; Jiawei Han; Hong Cheng; Xiaolei Li; Klabjan, D.;
Tianyi Wu;
Knowledge and Data Engineering, IEEE Transactions on
Volume: 22 , Issue: 1
Digital Object Identifier: 10.1109/TKDE.2009.61
Publication Year: 2010 , Page(s): 90 - 104

IEEE JOURNALS

Massive radio frequency identification (RFID) data sets are expected to become commonplace in supply mining this data is an essential problem with great potential benefits for inventory management, object Since RFID tags can be used to identify each individual item, enormous amounts of location-tracking d movements can be modeled by movement graphs, where nodes correspond to locations and edges rec locations. In this study, we develop a movement graph model as a compact representation of RFID dat information can be associated with the objects in such a model, the movement graph can be huge, com that such a graph can be better organized around gateway nodes, which serve as bridges connecting d based object movement cube can be constructed by merging and collapsing nodes and edges according Moreover, we propose an efficient cubing algorithm that performs simultaneous aggregation of both sp movement graph, guided by such a topological structure.

Frequency notched UWB elliptical dipole tag with multi-bit data scattering properties

Manteghi, M.; Rahmat-Samii, Y.;
Antennas and Propagation Society International Symposium,
2007 IEEE
Digital Object Identifier: 10.1109/APS.2007.4395612
Publication Year: 2007 , Page(s): 789 - 792

IEEE CONFERENCES

A novel method is presented to assign and recover multi-bit data in a metallic tag structure. A planar e structure. Two arms of this dipole were connected to each other through a metallic strip. Notch frequer elliptical dipole structure. The simulation results revealed that these frequencies could be recovered in

Architectural Support for Run-Time Validation of Program Data Properties

Arora, D.; Ravi, S.; Raghunathan, A.; Jha, N.K.;
Very Large Scale Integration (VLSI) Systems, IEEE

Transactions on
Volume: 15 , Issue: 5
Digital Object Identifier: 10.1109/TVLSI.2007.896913
Publication Year: 2007 , Page(s): 546 - 559

IEEE JOURNALS

As computer systems penetrate deeper into our lives and handle private data, safety-critical applicatior to breach their security also assume significant dimensions way beyond an amateur hacker's play. Unti evident in regular updates to antivirus software, patches issued by vendors after software bugs are dis realizing the need to incorporate security during the design of a system, be it software or hardware. W based system to enable protection of a program's data during execution. In this paper, we develop a g against a wide class of security attacks. Our work is based on the observation that a program's normal accesses can be characterized by various properties. We present a hardware/software approach where and enforced as security policies during program execution. These policies may be application- specific compiler- generated (e.g., enforcing that variables are accessed only within their scope), or universally WRITES to unallocated memory). We show how an embedded system architecture can support such po represent the attributes of each datum as security tags that are linked to it throughout its lifetime and interprets the semantics of the tags and enforces the desired security policies. We evaluated the effecti various security policies for several embedded benchmark applications. Our experiments in the context the proposed solution ensures- run-time validation of application-defined data properties with minimal

Design of Secure and Low-Cost RFID Tag Baseband

Jianping Wang; Huiyun Li; Fengqi Yu;
Wireless Communications, Networking and Mobile Computing,
2007. WiCom 2007. International Conference on
Digital Object Identifier: 10.1109/WICOM.2007.516
Publication Year: 2007 , Page(s): 2066 - 2069

IEEE CONFERENCES

Nowadays, radio frequency identification (RFID) has been widely used in our everyday life, and has aro security. Cryptographic techniques can be used to protect privacy but are too expensive for low-cost RI proposes a new RFID system structure. In our system, the RFID tag sends only the hashed tag ID num data is intercepted, the adversary cannot retrieve any useful information. This paper also presents the structure. Our design is implemented in an Altera FPGA. The experiment shows that the security of the secure basic tags, while having less gate equivalents than some secure tags with other RFID system st

More flexible data types

Spreitzer, M.; Begel, A.;
Enabling Technologies: Infrastructure for Collaborative
Enterprises, 1999. (WET ICE '99) Proceedings. IEEE 8th
International Workshops on
Digital Object Identifier: 10.1109/ENABL.1999.805221
Publication Year: 1999 , Page(s): 319 - 324

IEEE CONFERENCES

XML can play several roles in a distributed object system. In particular, data can be serialized in XML-b describing than data encoded in many more traditional ways, which facilitates the kind of decentralized

development: XML's explicit "tagging and bagging" helps keep extensions straight. However, today's co systems that are not flexible enough to describe such data. We suggest a way to make more flexible d in general, and is critical to realizing XML's full potential. This approach has: (1) typing judgements bas extensible record types with optional fields, (3) coarse record types, for which extension is compatible record values

Research on Packet Tagging Using the Attributes of Data Stream

Sun Dakang; Yan Danfeng; Yang Fangchun;
Communications and Mobile Computing (CMC), 2010
International Conference on
Volume: 1
Digital Object Identifier: 10.1109/CMC.2010.78
Publication Year: 2010 , Page(s): 116 - 120

IEEE CONFERENCES

For the important role of packets in the network management and security applications, many researcl record and store the packets in an efficient structure is a problem in this field. This paper focuses on th on existing research, this paper presents a tagging method using the attributes of data stream. This m of raw packets and make a data structure for packets storage. Through experiment, it's showing that tl description for the packets, supports network applications basing on network packets. This method has highly scalable over existing methods.

A ring array processor architecture for highly parallel dynamic time warping

Takahashi, J.; Hattori, S.; Kimura, T.; Iwata, A.;
Acoustics, Speech and Signal Processing, IEEE Transactions on
Volume: 34 , Issue: 5
Publication Year: 1986 , Page(s): 1310 - 1318

IEEE JOURNALS

A ring array architecture is studied on a hardware algorithm and a control scheme for dynamic time wa time speech recognition. For developing a practical DTW processor, the key factors are to reduce the n architecture and to maintain highly efficient concurrency and high throughput. Regular data and contro every constituent PE uses parallel and pipelined operations on the data. Regular and continuous DTW p volume, is realized with a novel control scheme based on "tags" and "status flags" attached to the data scheme permits a simple control structure to be achieved for the array system. The efficiency and thro then compared to orthogonal array architecture.

A low-power asynchronous data-path for a FIR filter bank

Nielsen, L.S.; Sparso, J.;
Advanced Research in Asynchronous Circuits and Systems,
1996. Proceedings., Second International Symposium on
Digital Object Identifier: 10.1109/ASYNC.1996.494451
Publication Year: 1996 , Page(s): 197 - 207

IEEE CONFERENCES

This paper describes a number of design issues relating to the implementation of low-power asynchron paper addresses the design of a dedicated processor structure that implements an audio FIR filter bank algorithm requires a fixed number of steps and the moderate speed requirement allows a sequential im huge predominance of numerically small data values in the input data stream, is the key to a low-powe minimized in two ways: by reducing the switching activity in the circuit, and by applying adaptive scalir that the average case latency as 2-3 times better than the worst case. The paper reports on a study of implications it has on the choice of architecture, handshake-protocol, data-encoding, and circuit design data-path into slices, and an asynchronous ripple carry adder that avoids a completion tree

An experimental method for obtaining device parameters of SAW RFID tags

Dasong Peng; Fengqi Yu;
Ultrasonics, Ferroelectrics and Frequency Control, IEEE
Transactions on
Volume: 57 , Issue: 6
Digital Object Identifier: 10.1109/TUFFC.2010.1567
Publication Year: 2010 , Page(s): 1478 - 1482

IEEE JOURNALS

To make a SAW radio frequency identification (RFID) tag carry more information, it should consist of se related parameters of the tag in selected frequency band, such as propagation loss when it propagates coefficient of the IDT (interdigital transducer), and reflection and transmission coefficients of reflectors electrodes, or both. In this report, we propose a novel method which can obtain these parameters thro new test-device structure with different numbers and widths of electrodes of reflectors fabricated in on simultaneously, which can greatly reduce the tag design cost.

Efficient XML query using Relational Data Model

Sungchul Hong; Yeong-Tae Song;
Software Engineering, Artificial Intelligence, Networking, and
Parallel/Distributed Computing, 2007. SNPD 2007. Eighth ACIS
International Conference on
Volume: 3
Digital Object Identifier: 10.1109/SNPD.2007.540
Publication Year: 2007 , Page(s): 1095 - 1100

IEEE CONFERENCES

XML files are effective for data store, search and query when used as a single entity. However, when it performance and efficiency are the ones that are to be degradated. To cope with such degradation, we into a relational database for permanent storage and take advantage of relational database manageme certain record. Once the resulting record - used to be an XML file - is located, it will be converted back further use, the XML is merged back to the database. To accommodate such need, multiple tables are our approach, there are two data transformation functions - one is to conver XML to relational data mo We have developed a prototype conversion system for the technical feasibility analysis. For the sake of collaboration system called VCEI where for each discussion session, all the discussion or conference cor the number of discussions grows big and so is the number of XML files. The prototype also demonstrat conferencing system.

Compressing SOAP Messages by using Pushdown Automata

Werner, C.; Buschmann, C.; Brandt, Y.; Fischer, S.;
Web Services, 2006. ICWS '06. International Conference on
Digital Object Identifier: 10.1109/ICWS.2006.46
Publication Year: 2006 , Page(s): 19 - 28

IEEE CONFERENCES

In environments with limited network bandwidth or resource-constrained computing devices the high a disadvantageous. Therefore, recent research work concentrated on more compact, binary representatic characteristics of SOAP communication most of these approaches are not applicable in the field of Web latest developments in the field of XML data compression. Then we will introduce a new approach for c the structure of the data from an XML schema or WSDL document to generate a single custom pushdo efficient validating parser but also as a compressor: its transitions are tagged with short binary identifi This approach leads to extremely compact data representations as well as low memory and CPU utilizat

Transformation of numerical algorithms for data-flow processing

Gaudiot, J.L.; Wei, Y.H.;
System Sciences, 1988. Vol.I. Architecture Track, Proceedings of the Twenty-First Annual Hawaii International Conference on
Volume: 1
Digital Object Identifier: 10.1109/HICSS.1988.11778
Publication Year: 1988 , Page(s): 301 - 310

IEEE CONFERENCES

The application of data-driven principles of execution to several numerically intensive computations is c sort method, the LU decomposition algorithm and matrix multiplication have been chosen since they ar provide good benchmarks for the evaluation of the performance of data-flow systems. First, a high-leve algorithms involved. Then the transformation between the high-level program and the low-level data-fl methods of translation applied to a number of high-level program constructs. Particular attention is giv tagged-token data-flow architecture has been simulated and provides the basis for a performance anal

Hardware-Accelerated Parser for Extraction of Metadata in Semantic Network Content

Moscola, J.; Cho, Y.H.; Lockwood, J.W.;
Aerospace Conference, 2007 IEEE
Digital Object Identifier: 10.1109/AERO.2007.352793
Publication Year: 2007 , Page(s): 1 - 8

IEEE CONFERENCES

We have implemented a new network information processing system using reconfigurable hardware th key functions of the system is to extract semantic information. Before we can determine the meaning c project, we have implemented an N-gram based language identifier that can process up to 1 Gbps thro network traffic, such as email and Web data, consists of markup information such as tags and protocol the language identification process causing decreased accuracy. Thus, we developed a hardware archit Our Application Level Processing System (ALPS) is a custom processor that is automatically generated

resulting circuit is mapped on to a reconfigurable device to efficiently extract only the relevant data for effectiveness of the architecture, we have implemented a system that can process electronic mail. Our accuracy of the hardware language identifier by up to a factor of 200 as compared to a system that do

A generic load/extract utility for data transfer between XML documents and relational databases

Bourret, R.; Bornhovd, C.; Buchmann, A.;
Advanced Issues of E-Commerce and Web-Based Information Systems, 2000. WECWIS 2000. Second International Workshop on
Digital Object Identifier: 10.1109/WECWIS.2000.853868
Publication Year: 2000 , Page(s): 134 - 143

IEEE CONFERENCES

XML is rapidly gaining momentum in e-commerce and Internet-based information exchange, where its as a semantics-preserving data exchange format. However, to realize this potential it is necessary to b documents and store it in a database, as well as to generate XML documents from data extracted from scrambling to extend their products to handle XML, there is a need for a lightweight, DBMS- and platfo paper, we describe such a utility that solves the following problems: (1) loading data from XML docume creating XML documents according to a known document type definition (DTD) from data extracted fro from XML DTDs for on-the-fly storage of XML documents, and (4) generating XML DTDs from relational data. We introduce a language to describe a mapping between an existing XML DTD and an existing rel issues arising from such a mapping

A Table-Based Application-Specific Prefetch Engine for Object-Oriented Embedded Systems

Hessabi, S.; Modarressi, M.; Goudarzi, M.; Javanhemmat, H.;
Embedded Computer Systems: Architectures, Modeling and Simulation, 2006. IC-SAMOS 2006. International Conference on
Digital Object Identifier: 10.1109/ICSAMOS.2006.300802
Publication Year: 2006 , Page(s): 7 - 13

IEEE CONFERENCES

A table-based application-specific data prefetching mechanism is presented in this paper. This mechani application specific instruction-set processors (ASIP) we develop customized to an object-oriented appl accesses of a class method into two conditional and unconditional parts. We supply the prefetch engine prefetch all data fields of an object required by a class method when the class method is invoked. Effec dividing them based on the method to which they belong and storing the access information of nested proposed mechanism. In addition, by adding a prefetch flag to cache blocks, we eliminate a large numb show that the proposed mechanism reduces the cache miss ratio and prefetch related tag comparisons

Enhanced 4D heart model based on high resolution dual source gated cardiac CT images

Segars, W.P.; Mendonca, S.; Sturgeon, G.; Tsui, B.M.W.;
Nuclear Science Symposium Conference Record, 2007. NSS '07. IEEE

Volume: 4
Digital Object Identifier: 10.1109/NSSMIC.2007.4436684
Publication Year: 2007 , Page(s): 2617 - 2620
IEEE CONFERENCES

We have developed a new 4D heart model for use in the 4D NCAT phantom that, through modification a wide variety of beating heart motions, normal and abnormal. High-resolution gated cardiac CT data o MSCT scanner was used to define the more detailed anatomy of the model. The study consisted of 100 For each time frame, 3D NURBS and subdivision surfaces were created to model the four cardiac chaml muscles, valves, and other small details of the heart. The motion vector field of the chamber surfaces t combining information from the CT data as well as the gated tagged MRI data upon which the original twisting motion of the heart cannot be ascertained from CT imaging data; therefore, the twisting motio new heart segmented from the CT data. Once the twisting motion was established, the radial and longi epi- and endocardial borders in the gated MSCT images. The motion of the vessels and other cardiac st points located on or within them for each subsequent time frame. Time curves were defined for the cor changing 3D surface or 4D model for each heart structure. The resulting heart model was parameterize and time duration of different portions of the cardiac cycle as well as the global and regional motion) sc the cardiac motion. The model will provide a useful simulation tool for evaluating and improving existin techniques used in the diagnosis of cardiac disease.

User Controllable Data Grouping for Business Document Translation

Shyh-Kwei Chen; Jen-Yao Chung; Ding, M.J.;
e-Business Engineering, 2007. ICEBE 2007. IEEE International
Conference on
Digital Object Identifier: 10.1109/ICEBE.2007.67
Publication Year: 2007 , Page(s): 276 - 283
IEEE CONFERENCES

Business document translation is a critical business activity that is essential for business process integr applications, common document formats or standards must be followed across business entities, e.g., t popular extensible Markup Language (XML). Based on the document object model (DOM), both source structural trees. Naturally, document translation involves a tree traversal process (for source) and a tre grouping problem occurs when there are multiple items of the same type (or XML tag) and there is a n document translation process may need to traverse the source DOM trees multiple times due to the am we propose a document translation mechanism that performs a tree traversal over the source tree stru tree structure based upon user-defined rules. For certain grouping options that may cause ambiguity d just an additional pass over the target tree structure.

Two-way converter between the HL7 aECG and SCP-ECG data formats using BioSig

Schloegl, A.; Chiarugi, F.; Cervesato, E.; Apostolopoulos, E.;
Chronaki, C.E.;

Computers in Cardiology, 2007
Digital Object Identifier: 10.1109/CIC.2007.4745469
Publication Year: 2007 , Page(s): 253 - 256

IEEE CONFERENCES

This paper presents an effort launched in 2006 by the OpenECG network, led by the Graz University of 11073 and CEN TC251 to create a two-way converter in C++ between the SCP-ECG and the HL7 aECG internal data format, was used as an intermediate structure. This design approach allowed people with implementation of the converter. ECG data sets from the OpenECG portal were used to test the conver identified. In fact, the SCP-ECG standard includes clinical data of the patient such as blood pressure, w aECG standard. Moreover, the annotations of HL7 aECG can be translated to GDF events, but, currentl annotations or GDF events is by using custom tags or sections. The first version of the converter has b BioSig and OpenECG communities. Some data mapping issues remain open in this first release. Howev that they will be addressed in the collaboration among the relevant Standard Developing Organizations interoperability in electrocardiography.